- Aagaard, E., Teherani, A., & Irby, D. M. (2004). Effectiveness of the one-minute preceptor model for diagnosing the patient and the learner: proof of concept. *Acad Med, 79*(1), 42-49.
  - An interesting teaching technique used in primary care

  PURPOSE: To compare the One-Minute Preceptor (OMP) and traditional models of ambulatory teaching in terms of the preceptors' (1) ability to correctly diagnose patients' medical problems, (2) ability to rate students' skills and confidence in doing so, and (3) satisfaction with both models. METHOD: A within-groups experimental design study was conducted with 116 preceptors at seven universities in 2000. Participants viewed scripted, videotaped precepting encounters of both models using two cases and were asked to rate students' abilities, their confidence in rating the students' abilities, and the effectiveness and efficiency of the teaching encounters. RESULTS: Preceptors who viewed the videotapes of the OMP model were equally or better able to correctly diagnose the patients' medical conditions than those viewing the traditional model. Preceptors viewing the OMP rated students' abilities higher on history taking/physical examination, presentations, clinical reasoning, and fund of knowledge than did those viewing the traditional model. Preceptors viewing the OMP rated themselves as more confident in rating students' abilities in presentation, clinical reasoning, and fund of knowledge. Preceptors rated the OMP as more effective and more efficient than the traditional model. CONCLUSIONS: Preceptors viewing scripted, videotaped teaching encounters using the OMP model were equal to or better able to correctly diagnose patients' medical problems, had greater self-confidence in rating students, and rated the encounter as more effective and efficient than when viewing the traditional model.

- Bloom, B.S. (Ed.) (1956). *Taxonomy of educational objectives: The classification of educational goals: Handbook I, cognitive domain.* New York ; Toronto: Longmans, Green.
  - The classic text about the domains of learning

- Chipas, A. (1995). Do current educational programs address critical thinking in nurse anesthesia? *AANA J, 63*(1), 45-49.

  Critical thinking skills are vital in any of the nursing and medical specialties. These skills can be taught using adult teaching methods and should be incorporated into all courses in the educational process. Unfortunately, some nurse anesthesia programs fail to adequately address critical thinking or the use of these skills. They often teach using rigidly structured models. This descriptive study surveyed nurse anesthesia students (n = 197) and faculty members (n = 128) from 32 schools of nurse anesthesia. It was undertaken to determine the effect of using adult education principles on student satisfaction. Participants completed a survey that was designed by the investigator to determine individual perceptions of the program's teaching style, personal teaching and learning style preference, and, in the case of the students, satisfaction. Results of this study suggest that anesthesia students are more satisfied if they are approached as adult learners. Critical thinking, a vital component of nurse anesthesia practice, is also reinforced by these same teaching methods.

- Conn, J. J. (2002). What can clinical teachers learn from Harry Potter and the Philosopher's Stone? *Med Educ, 36*(12), 1176-1181.

  Many clinical teachers acquire a working knowledge of the principles of teaching and learning through observation, by adopting positive and rejecting negative examples of clinical

instruction. Well selected vignettes of teaching behaviours taken from contemporary film and literature may provide rich substrate by which to engage clinical teachers in discourse about instructional technique. This paper draws on J K Rowling's novel and its companion film, Harry Potter and the Philosopher's Stone, and critically analyses the teaching styles of the staff at Hogwarts School of Wizardry and Witchcraft in the context of contemporary generic and medical education literature. Specifically, it argues that effective teachers demonstrate not only an in-depth knowledge of their discipline but possess a keen appreciation of the cognitive changes that occur in their students during the learning process. They are, furthermore, proficient in core instructional skills such as small group facilitation, feedback and questioning. Most importantly, effective teachers model appropriate attitudes in their professional setting and possess highly developed personal qualities such as creativity, flexibility and enthusiasm.

- Fagerlund, K., & Kusy, M. (1999). Teaching, learning, and leading. *AANA J, 67*(1), 45-47.
  Instructional systems design is a process for assessing learning needs, creating instructional programs, and evaluating effectiveness of learning. We discuss the benefits of including instructional systems design theory and practice in the curriculum, with an emphasis on making the process relevant for student nurse anesthetists.

- Faut-Callahan, M. (2001). Mentoring: a call to professional responsibility. *AANA J, 69*(4), 248-251.

The following are potentially useful resources from Florida State, aimed primarily towards primary care but are useful in nurse anesthesia education

- Florida State University. Resources and Information for Clinical Faculty. Available at http://med.fsu.edu/education/FacultyDevelopment/clinicalfaculty.asp.
- Florida State University. Resources and Information for Residents Who Teach. Available at http://med.fsu.edu/education/FacultyDevelopment/residentsite.asp
- Florida State University. Resources and Information for Clerkship Faculty Years 3 and 4. Available at http://med.fsu.edu/education/FacultyDevelopment/preceptyr34.asp.

- Garcia-Otero, M., & Teddlie, C. (1992). The effect of knowledge of learning styles on anxiety and clinical performance of nurse anesthesiology students. *AANA J, 60*(3), 257-260.
  This study examined how students' knowledge of their learning styles affected their anxiety and clinical performance. In a graduate program of nurse anesthesiology with a sample size of 43 students, results indicated that, over time, students who were aware of their learning styles demonstrated less anxiety than those who were not. Knowledge of learning styles also improved clinical performance in the cognitive and affective domains. Recommendations for schools of nurse anesthesiology are discussed.

- Hand, R., & Thompson, E. (2003). Are we really mentoring our students. *AANA J*, 71(2), 105-108.

- Hartland, W., Jr., & Londoner, C. A. (1997). Perceived importance of clinical teaching characteristics for nurse anesthesia clinical faculty. *AANA J, 65*(6), 547-551.
  This study examined the perceived importance of the 22 characteristics of effective clinical instructors as identified by Katz in 1982. Using a questionnaire survey instrument, a random

sample of 354 nurse anesthesia program directors, Certified Registered Nurse Anesthetist clinical instructors, first-year nurse anesthesia students, and second-year nurse anesthesia students from across the United States participated in this study. The mean scores of importance for each characteristic demonstrate that respondents perceived all 22 characteristics as being very important. When all 22 characteristic mean scores for each group were arranged in descending order by the researcher, no significant difference was found between respondent groups. Multiple regression analysis demonstrated that the demographic variables accounted for only an extremely small percentage of the variance. It appears that all four professional groups valued the 22 characteristic and perceived them as critically important to clinical instruction. The researcher suggests that this homogeneity among all four groups may be the result of students' previous exposure to clinical instructors. Findings in this study have implications for guiding nurse anesthesia clinical instructors in their quest for clinical teaching excellence through evaluation and faculty development programs.

- Katz, L. E. (1984). Characteristics of clinical teachers in nurse anesthesia. *AANA J*, 52, 192-197.

- Kless, J. R. (1989). Use of a student support group to reduce student stress in a nurse anesthesia program. *AANA J, 57*(1), 75-77.

  Stress in nurse anesthesia programs may be excessive at times, especially in new students. While some degree of stress is necessary to motivate learning, excessive or prolonged stress can interfere with the normal learning process, thereby prolonging a student's clinical and academic progress. In the extreme, excessive stress may even preclude a student's successful completion of the educational program. Active faculty intervention through a student support group is advocated as a method for controlling stress levels and facilitating student learning. The positive effects of such intervention also increase the overall productivity of a program and better prepare nurse anesthesia students for their future careers.

- Larsson, J., Holmstrom, I., Lindberg, E., & Rosenqvist, U. (2004). Trainee anaesthetists understand their work in different ways: implications for specialist education. *Br J Anaesth, 92*(3), 381-387.

  BACKGROUND: Traditionally, programmes for specialist education in anaesthesia and intensive care have been based on lists of attributes such as skills and knowledge. However, modern research in the science of teaching has shown that competence development is linked to changes in the way professionals understand their work. The aim of this study was to define the different ways in which trainee anaesthetists understand their work. METHODS: Nineteen Swedish trainee anaesthetists were interviewed. The interviews sought the answers to three open-ended questions. (i). When do you feel you have been successful in your work? (ii). What is difficult or what hinders you in your work? (iii). What is the core of your anaesthesia work? Transcripts of the interviews were analysed by a phenomenographic approach, a research method aiming to determine the various ways a group of people understand a phenomenon. RESULTS: Six ways of understanding their work were defined: giving anaesthesia according to a standard plan; taking responsibility for the patient's vital functions; minimizing the patient's suffering and making them feel safe; giving service to specialist doctors to facilitate their care of patients; organizing and leading the operating theatre and team; and developing

one's own competence, using the experience gained from every new patient for learning. CONCLUSIONS: Trainee anaesthetists understand their work in different ways. The trainee's understanding affects both his/her way of performing work tasks and how he/she develops new competences. A major task for teachers of anaesthesia is to create learning situations whereby trainees can focus on new aspects of their professional work and thus develop new ways of understanding it.

- Lieb, S. Principles of adult learning. Available at http://honolulu.hawaii.edu/intranet/committees/ FacDevCom/guidebk/teachtip/adults-2.htm
  - A great review of adult learning

- McLaughlin, K., & Mandin, H. (2001). A schematic approach to diagnosing and resolving lecturalgia. *Med Educ, 35*(12), 1135-1142.
  - A must for anybody who is tasked to present a lecture!

BACKGROUND: The lecture is a much used and much criticized teaching method. Lecturalgia (painful lecture) is a frequent cause of morbidity for both teachers and learners. The etiology of lecturalgia is multifactorial and multiple lecturing pathologies frequently coexist. The 'Clinical Presentation' curriculum at the University of Calgary encourages the use of 'schemes' that provide a scaffolding for learning and a starting point for approaching (clinical) problems. Thus far this approach has not been used to tackle teaching or learning problems. AIM: Our aim in this paper was to devise a schematic approach to diagnosing lecturing problems and to make evidence-based recommendations on how to resolve lecturing problems. We have suggested that causes of lecturalgia can be divided into three categories: poor judgement; poor organization; and poor delivery. Our proposed scheme is based upon these three categories that are then subcategorized. RESULTS: We have reviewed the medical education literature in an attempt to provide evidence-based recommendations for the remediation of lecturing problems within each subcategory. CONCLUSION: Where trial evidence is lacking we have made recommendations that are consistent with cognitive theory or expert opinion. Finally, where expert opinion does not exist, we have taken the liberty (literary license) of providing nonexpert opinion!

- Mauleon, A. L., & Ekman, S. L. (2002). Newly graduated nurse anesthetists' experiences and views on anesthesia nursing--a phenomenographic study. *AANA J, 70*(4), 281-287.

This qualitative study identifies and describes different ways in which newly graduated nurse anesthetists (NAs) experience and perceive nurse anesthesia. It explains different approaches to nurse anesthesia care and, thus, to clinical nursing care (in an anesthesia and surgical context), provided by new NAs. One month after graduation, all NAs who had completed an anesthesia nursing program responded to 4 open-ended questions. A phenomenographic method was used to analyze their responses. The results were divided into 3 categories, which describe nurse anesthesia from the perspectives of (1) maintaining physical well-being; (2) being protectors and advocates; and (3) ability to perform good nurse anesthesia given all the demands placed on the NAs. The results indicate that, for the new NAs, the nurse anesthesia care situation was largely influenced by context and generated feelings of inadequacy because the NAs could not provide the emotional support that they believed their patients required.

- Meno, K. M., Keaveny, B. M., & O'Donnell, J. M. (2003). Mentoring in the operating room: a student perspective. *AANA J, 71*(5), 337-341.

- Perez, E. C., & Carroll-Perez, I. (1999). A national study: stress perception by nurse anesthesia students. *AANA J, 67*(1), 79-86.

- Sherbinski, L. (1994). Learning styles of nurse anesthesia students related to level in a master of science in nursing program. *AANA J, 62*(1), 39-45.

  To alleviate the shortage of anesthetists, nurse anesthesia programs are expanding and new programs are being developed while they simultaneously move into the master's degree framework. Students' learning style preferences can provide valuable information for educators engaged in facilitating and enhancing learning. This study identified the learning styles of nurse anesthesia students enrolled in 12 programs that confer a master of science in Nursing degree in relation to the students' gender and level in an anesthesia program. Learning profiles were determined by scores on the Learning Style Inventory (Kolb, 1985). A personal data sheet was used to elicit the students' demographic characteristics. Surveys were administered to a sample of 264 nurse anesthesia students, with 164 usable responses (62.8%). Results indicated a preference for the assimilator learning style (37.2%). A statistically significant relationship between learning style and level in an anesthesia program was found (chi-square = 11.14, df = 3, $P < .05$). Whereas students who had completed fewer than 12 months in an anesthesia program showed no dominant preference for a learning style, students who had completed more than 12 months were predominantly distributed in two learning style categories: assimilators (40.0%) and convergers (38.8%). No statistically significant relationships were identified between learning styles and gender.

- Waugaman, W. R. (1998). Inspiring teaching. *AANA J, 66*(6), 559-563.